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What Every Cryptologist Should Know about Pearl Habor (U)----------**TOM JOHNSON** 55

(U) Further analyses of the events surrounding the "day that will live in infamy."

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What Every Cryptologist Should Know about Pearl Harbor

TOM JOHNSON

The surprise Japanese attack on Pearl Harbor in 1941 was an event of surpassing importance in American history. But beyond that, it was the most important event of American **cryptologic** history. As cryptologists we should study Pearl Harbor for its impact on our profession. This impact is felt in two ways.

a. It has influenced how the American public views our profession. This has been influenced, in turn, by the winds of political change.

b. It surfaced a number of debates within the Federal Government about the place of cryptology and the methodology of intelligence analysis. We are still debating the issues that it raised.

The story of Pearl Harbor began like a mystery novel. How had the diminutive Japanese, growers of rice and practitioners of *bushido*, caught us off guard? By the time President Roosevelt went before Congress on 8 December to denounce the "day that will live in infamy" a stunned American public had already begun to ask the question: "How did they catch us with our pants down, Mr. President?"

How had they, indeed? To find out, Roosevelt promptly dispatched Secretary of the Navy Frank Knox to Honolulu. Knox returned on 14 December – something of a record considering the transit time required for a trip to Hawaii and back in those days – to report to Roosevelt on the devastation. In all, 2,403 men lost their lives and the backbone of the Pacific Fleet was at the bottom of the harbor. Morale, he reported, was terrible, and the commanders on the scene, Admiral Kimmel for the Navy and General Short for the Army, appeared shattered.

It had long been customary for military commanders to assume full responsibility for the performance of all people and operations under their command. The unit that ran away or the vessel that plowed into a wharf earned the commander summary relief. It came as no surprise to the American public, then, that Knox's return coincided with the dismissal of both Kimmel and Short from their positions. At the same time, Roosevelt announced the appointment of a commission of five distinguished Americans, headed by Supreme Court Justice Owen Roberts, to investigate the disaster and recommend remedial steps. Roberts and his commission flew to Hawaii and held a series of secret hearings. Kimmel and Short, along with a group of other officials involved, were interviewed. The proceedings were, by all contemporary accounts, extremely brief and exceedingly hostile to the two commanders in the field. There appears to have been no real attempt to explore the nuances of a military failure, only to find and identify a scapegoat for the American public. The idea was to get on with the war as quickly as possible and to spend as little time as was necessary putting Pearl Harbor behind us, to use the parlance of the 1970s. After spending a little time in Washington getting the story from administration figures such as Secretary of War Henry Stimson and Secretary Knox, the Roberts Commission released its report to the President. The two commanders in the field should bear direct and personal responsibility for the failure, but officials in Washington should be exonerated. They shared none of the blame.

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That was on 23 January 1942, only a month after Knox had returned from Hawaii. The administration was clearly proceeding with a good deal of haste to identify the culprits. On 28 February Knox and Stimson issued statements accepting the retirements of Kimmel and Short. A statement of charges was being prepared concerning dereliction of duty, which would later be adjudicated in a courts martial. The trial would proceed, however, "only at such a time as the public interest and safety would permit." Meanwhile, the two former commanders would have to wait their turn. This, the administration hoped, would silence dispute over the causes of the surprise.

To understand why it did not, one must turn to domestic politics. Roosevelt had been President since 1932. Although his success in domestic economy had caused a veritable political revolution and given him an overwhelming political majority, he had aroused diametrically opposed conservative views, and the passionate arguments had raged ever since his first election. These passions were immediately transferred to the Pearl Harbor controversy. Journalists on the political right pilloried the administration for being unprepared. In the days following the attack very few were listening, but as the war wore on and success became more certain, more energy was expended on the Pearl Harbor dispute. Each writer had his point of view, and it almost invariably reflected his political persuasion rather than a dispassionate analysis of the facts.

The first book-length explanation of what happened at Pearl Harbor was written by a pair of journalists closely connected to the Democratic Party, Forrest Davis and Ernest K. Lindley, who wrote *How the War Came* in 1942. Davis and Lindley could be considered "court historians" in the sense that they accepted the administration's word for things without too much digging. Two years later a politico named John T. Flynn, a longtime Roosevelt-hater, came out with *The Roosevelt Myth*, which hypothesized that our entry into the war was a result of Depression economics and Roosevelt's calculated attempt to end the Depression by egging Japan into war. Here was the first suggestion that Roosevelt himself played a hand in the attack by deliberately pushing Japan into a corner. According to Flynn, he had been told in 1938 by one of Roosevelt's "most intimate advisors" that the President would push Japan into a war so that he could fire up American heavy industry to build battleships. This, said Flynn, was the President's way of edging out of the Depression, and it had worked.

By Federal law, Kimmel and Short had to be tried within two years of their alleged dereliction. This term expired in December 1943. Congress extended it for six months and again for another six months when that period expired, but in so doing, directed the War and Navy departments to conduct internal investigations concerning the Japanese attack and the performance of the two commanders in the field. Conducting the investigations in secret, both boards took hundreds of hours of testimony from virtually everyone involved and had access to extremely sensitive documents regarding intelligence and operational matters. It was far more thorough and more objective than the Roberts panel. Both boards turned in reports highly critical of War and Navy department officials in Washington and singled out both George C. Marshall, Chairman of the Joint Chiefs of Staff, and Harold Stark, Chief of Naval Operations, for criticism. But the reports were classified, and in lieu of releasing their contents, an embarrassed Stimson and Knox issued brief press statements instead. They concluded that, though Kimmel and Stark shared much of the blame for unreadiness at Pearl Harbor, there had been incompetence galore, and it would be wrong to force them to shoulder the entire blame. Relief from duty was sufficient punishment, without going through the ignominy of a public trial. Their retirements stood unchanged.

This did not quiet the demand for public disclosure. What objection, Americans wanted to know, could there possibly be to releasing in entirety a report dealing with an issue that had occurred three years earlier? Surely the needs of military secrecy had been

met long ago. Now it just so happened that controversy over the Army and Navy boards occurred in the middle of the 1944 Presidential election. The Republicans were having difficulty finding an issue that would convince the public to evict a President in the middle of a world war. Surprise at Pearl Harbor was one of their few useful weapons. Republican congressmen began raising the cry of cover-up. Hugh Scott, a senator from Pennsylvania, claimed to know that the Australian Government had warned the administration on 6 December but had been ignored. Ralph Church, a representative from Illinois, introduced the name of Alwin Kramer, a Navy lieutenant commander who, Church said, had delivered messages to the State Department the evening of 6 December and the morning of 7 December, which the administration was covering up.

By the summer of 1944 there was clearly a certain amount of scuttlebutt on the Washington scene that the Administration had known about the attack in advance and was trying to cover this up. The story had something to do with breaking Japanese codes and related to a nocturnal mission by Kramer to deliver decoded Japanese dispatches to the President. Republican Presidential candidate Thomas Dewey had the information but was dissuaded from using it during the campaign by an emissary sent by General Marshall himself.

Reelection of Roosevelt did not end the clamor. Vociferous Republican demands for a congressional investigation increased, and finally, on 6 September 1945, Democratic Senator Alben Barkley of Kentucky issued a call for a joint investigation of Pearl Harbor. Four Democrats and four Republicans joined Barkley on the committee of nine. Roosevelt was now dead, and the Truman administration made a calculated decision to release all the classified documents so long under wraps. The Japanese diplomatic code had been broken; key administration officials had been aware of the lowering diplomatic clouds; certain warnings had been passed to Hawaii. Many of the key documents, including the now-famous 14-part Japanese message ending negotiations and breaking relations, were released in entirety. All important figures, less Roosevelt and Knox, who were dead, and Stimson, too ill to be present, were interrogated. So at last the secret was out, fair game for politicians, journalists, and historians.

And they had a field day. Within a year of the investigation's conclusion the first history was out. Written by George Morgenstern (a *Chicago Tribune* journalist), *Pearl Harbor: The Story of the Secret War* attacked the Roosevelt administration for mishandling the negotiations with Japan and for gross dereliction in failing to warn the commanders in the field of the impending storm. The next year Charles Beard, one of the most famous historians in America, claimed that Roosevelt had lured Japan into firing the first shot in a war he knew was inevitable. Beard pointed out that this was an unconstitutional aggrandisement of executive power. Congress alone was empowered to declare war and should not be maneuvered into one by events controlled by the President.

A whole school, called "revisionism," grew up around the Pearl Harbor hearings. The leading revisionist was Charles Tansill, chairman of the history department at Georgetown University. In *Back Door to War* (1953) he propounded a conspiracy theory, which went much farther than Morgenstern's. Incompetence was too mild a term – there had been something sinister in Roosevelt's studied lack of attention to the warnings conveyed in the coded Japanese messages. Why, after reading the first 13 parts of the final message late on the evening of 6 December, did not Roosevelt immediately call a meeting of his key military advisors? (The National Security Council was not set up until 1947.) To quote an incensed Tansill,

> The testimony of General Marshall and Admiral Stark would indicate that the Chief Executive took the ominous news so calmly that he made no effort to consult with them. Did he deliberately seek the Pearl Harbor attack in order to get America into the war? . . . This problem grows more complicated as we watch the approach of zero hour. At 9:00 A.M. on 7 December, Lieutenant Commander Kramer delivered to Admiral Stark the final installment of the Japanese instruction to Nomura. . . . But he made no effort to contact Honolulu. Instead he tried to get in touch with General Marshal, who, for some strange reason, suddenly decided to go on a long horseback ride. . . . Was there an important purpose to this ride? (pp. 651–52)

Tansill had concocted a "devil theory": Roosevelt deliberately withheld information from Hawaii to insure that the attack would lead to war. He wanted war, wrote Tansill, to protect the British Empire, which had been the primary aim of American foreign policy since 1900. To insure this, he had to enlist Marshall, Stark, Stimson, Knox and others in a conspiracy of silence. No longer did historians have to content themselves with diplomatic failure and military incompetence – Tansill had found outright conspiracy.

Tansill was regarded in historical circles as part of a "radical fringe"; most accounts were more conventional. Historians like Walter Millis (*This is Pearl*, 1947), Herbert Feis (*The Road to Pearl Harbor*, 1950), and Langer and Gleason (*The Challenge to Isolation*, 1952,and *The Undeclared War*, 1953) pointed to an aggressive Japanese military expansion and intractable diplomatic posture as the real causes. These accounts focused on the broader issues of diplomatic positioning and the problems of dealing with fascism and simply dismissed the conspiracy theory as incredible and mean-spirited.

A revisionist high-water mark of sorts was achieved in 1953 with the publication of *Perpetual War for Perpetual Peace* by Harry Elmer Barnes. Barnes's purpose was to provide a publication opportunity for his revisionist colleagues, including William Henry Chamberlin (*America's Second Crusade*, 1950), Frederick Sanborn (*Design for War: A Study of Secret Power Politics, 1937–1941*, 1951), Tansill, Morgenstern, and others. Barnes saw conspiracy everywhere. There was a conspiracy to cover up Pearl Harbor. There was a conspiracy to cover up the cover-up. There was a conspiracy to halt publication of revisionist tracts. Not content to contest the opposing theories on the basis of historical fact, Barnes resorted to name-calling, terming his historical opposition "hatchet men" and their reviews of revisionist writings "smears."

To understand the psychology of revisionism one must look at the political climate of the late forties and early fifties. After the war there was a pronounced swing to the political right. Truman's political upset of Dewey in 1948 increased the demands for an end to the Democratic control of the Presidency. This period coincided with the rise of Joe McCarthy, the trial of Alger Hiss, the loss of atomic supremacy to the Russians, and the fall of China to the Communists. The Korean War intensified the debate over "who lost China" and whether or not the State Department was shot through with Communist sympathizers and outright traitors. In this climate the revisionists came to represent the political far right, an academic equivalent of McCarthyism. Proponents of the accepted historical view on Pearl Harbor were, in many cases, associated politically with the administration. Herbert Feis was an economics adviser to the Department of State; Robert Sherwood (*Roosevelt and Hopkins*, 1948) worked as a speech writer for Roosevelt; both Langer and Gleason had held advisory positions within the Roosevelt administration during the war. Some, like Sherwood and Ernest K. Lindley, had made use of their close personal association with the President to obtain access to documents that had not yet been released to the public. The revisionists were just as clearly among the political "outs" and did not have equal access to these private collections. Academically they were "vitriolic and angry men" who heaped scorn on the so-called "court historians" who used their place at the political table to obtain unique materials. (Robert H. Ferrell, "Pearl Harbor and the Revisionists," *The Historian*, Spring 1955.)

The far right began losing its influence in the early days of the Eisenhower administration, and McCarthy died in 1957 a thoroughly discredited man. At the same time the academic debate over revisionism faded after the publication of Barnes's book. The argument was temporarily revived in 1955 by the publication of Admiral Kimmel's memoirs (*Admiral Kimmel's Story*), which took the administration to task for withholding information from the commanders at Pearl Harbor. Kimmel also accused Roosevelt of withholding critical military resources that would have permitted an adequate defense of Hawaii. The Democrats were thus guilty of military ineptitude and incompetence which virtually guaranteed that a Japanese attack would succeed.

On the whole, however, the late fifties and early sixties slipped by uneventfully. It was a time for summing up, and summaries were unkind to the revisionist school. Hans Trefousse, Robert Ferrell, and Wayne Cole, all renowned for their historical judgments, concluded that there was no substance to revisionism. Ferrell offered the most accurate judgment when he cited bad analysis, not conspiracy: "The real tragedy of the Magic episode is that this magnificent information on Japanese intentions and diplomatic maneuvering was not properly evaluated in the War and Navy departments; everybody's business (the intercepts went to the top officials of the government and military) became nobody's business, and the careful evaluation of the decoded intercepts was never accomplished." Finally, in 1962, a new book by Roberta Wohlstetter seemed to put the matter to rest forever (Wohlstetter, *Pearl Harbor: Warning and Decision*). Her thesis was that there had been too much information, not too little, and that the nuggets were buried in what she called the "noise." This was hailed as a brilliant explanation of events, and Wohlstetter has since been used as a consultant by successive governments on the problem of indications and warning.

Revisionists and establishment historians continued to snipe, but the dispute seemed basically over. Then in 1977 the American and British governments declassified and released much of their World War II Sigint archives. Over the next several years millions of pages of selected wartime Sigint documents were declassified and released to the National Archives in Washington and the Public Records Office in London. Historians went scrambling for the information, and a new wave of Pearl Harbor accounts hit the bookstores. The first significant addition was British historian John Costello's *The Pacific War* (1981).

Costello subjected the Sigint messages to detailed examination. His conclusions appeared at first glance to differ little from previous scholarship. Kimmel was not, indeed, getting vital information. Stark decided not to give him Magic because there had been a scare in the spring of 1941 occasioned by a warning passed to the Japanese by the Germans that their diplomatic circuits were not secure. The Japanese apparently ignored the warning, but the War and Navy departments did not. They tightened security and reduced dissemination; from then on Kimmel received only vague summaries penned by Admiral Stark himself. But Magic contained no military information. Much more important was traffic from the consular code, JN-19, which contained information of counterespionage value. Intense Japanese interest in Pearl Harbor was reflected in coded dispatches, which were either ignored (because of supposed low value) or simply not passed on. Costello became tremendously impressed with the volume of Sigint and thus buttressed Wohlstetter's noise thesis. "It is now easy to see how the principal cause of the breakdown in American military intelligence during the period before Pearl Harbor was that it was grossly overloaded and unable to carry out an adequate evaluation procedure" (p. 609).

But Costello's central thesis was revisionist. After examining the evidence he decided that there must be more. Speculating on what "more" there might be, he propounded a rather elaborate theory that the British had broken the Japanese fleet operational code,

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called by the American cryptologists JN-25, and were privy to Japanese intentions, even though the American Navy had not yet broken it. (He also noted with interest that the U.S. had given the British a Purple analog machine, used to decipher Magic traffic, and speculated that they might have had more Magic decrypts than we did.) He went on to hypothesize that Churchill may have either passed a warning to Roosevelt on 26 November, in which case the Americans would be culpable for the disaster, or withheld it to insure the United States would enter the war, in which case Churchill would be the villain. He pointed out that the British had yet to release Sigint for the period leading up to the attack and felt there was something fishy.

A year later an American, John Toland, published *Infamy: Pearl Harbor and Its Aftermath* (1982). This totally revisionist book examined all the alleged warnings and credited every one. Agent warnings about a Japanese attack on Pearl Harbor appeared to deluge the Roosevelt administration. These would now be called Humint, and authenticating this information was as difficult then as it is now. Some now appear to have been genuine – for instance, the information provided by double agent Dusko Popov, the infamous "Tricycle" to whom J. Edgar Hoover refused to listen. Information was passed through Koreans, Peruvians, Dutch, British – any nation and every nation. Most of this was rather low quality stuff, if it was not in fact a figment of someone's forty-year-old imagination. Where Toland made his headlines, however, was a story straight out of Sigint – the famous Seaman Z story.

Seaman Z was a young Naval reservist working in the 12th Naval District Headquarters in San Francisco in 1941. Sometime in November his supervisor told him to plot some mysterious DF fixes alleged to be a Japanese fleet somewhere in the northern Pacific. A few days later Pearl Harbor was bombed, and for the first time young "Z" made a connection between the air raid and the transmissions. He assumed that the vessels had been the carrier strike force, and that the information had surely been reported promptly to President Roosevelt. He remained silent about the incident until Admiral Kimmel's son convinced him, many years later, to talk to Toland about it.

The information caused a sensation in historical circles, and Seaman Z was promptly unmasked as one Robert Ogg, then a retired California businessman. He submitted to a more detailed and searching interview with cryptologic experts from the Naval Security Group Headquarters and did not come out quite so well. He did not know where the fixes came from. (It was probably a Federal Communications Commission operation.) He only assumed that he was following a Japanese carrier task force but had no technical basis for this and did not inquire as to how his supervisors had identified the transmissions as Japanese. When questioned, he hadn't the foggiest idea how one went about making such an identification. There was not a shred of evidence that cryptologic professionals in OP-20-G (NSG's predecessor) so identified this traffic. For all the amateurs in the 12th Naval District knew, the signals could have emanated from a Liberian freighter, a commercial fishing fleet, or an off-course Lebanese taxi cab. As for the idea that Ogg's commander, Captain McCullough, was a personal friend of Roosevelt's and would surely have passed this information on to the White House, research into administration records and files in the Roosevelt Library revealed no such connection between the two. And even if the two had been acquainted, the Navy had not yet arrived at the point where an obscure intelligence officer in a Naval geographic command could pick up the phone and call the White House. The technical weaknesses of Toland's Seaman Z story were exposed by the NSG interview, and the entire episode was reduced to smoldering ruins in an article by Telford Taylor, who had been chief of the American-British cryptologic liaison office in London during the war. ("Days of Infamy, Decades of Doubt," *New York Times Magazine*, 29 April 1984.)

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According to Toland, other Sigint-based warnings came from the Dutch, who had broken Japanese consular codes and had information about Japanese attacks on Hawaii, Philippines, Malaya, and Thailand. (This was entirely possible since the consular codes were known to be vulnerable, and some of the messages did carry information of this type.) Still another warning came from the British, who on 6 December warned the American observer in Cairo, Colonel Bonner Fellers, of an impending Japanese attack on the U.S. within 24 hours. (Fellers did not forward the information.) Here was another allegation of British foreknowledge of the sort propounded by Costello the year before.

Toland also rehashed the infamous Winds Execute controversy which had played such a prominent role in the 1945 Pearl Harbor Hearings. The Winds Code ("East Wind Rain") was clearly set up by the Japanese as an insurance policy to get a war message through to its embassies and consulates at the last moment should there be no secure means of communication. But that was the last thing any two people agreed upon. At the hearings Captain Laurance Safford, who had headed OP-20-G in 1941, contended that the execute message had been intercepted a few days before the attack but had not been forwarded to Kimmel. Others claimed that another code meaning war with Britain (or possibly Russia) had been received, still others that no execute message at all had been intercepted, and some just couldn't remember. No message was ever found in the official files, but Safford claimed they must have been rifled. In dealing with the controversy, Toland resurrected the testimony of Seaman Ralph Briggs, who claimed to have been the operator at Cheltenham, Maryland, who intercepted the message. Safford discovered Briggs when preparing his testimony for the Committee, but Brigg's commanding officer stepped in and forbade the young sailor to testify. The whole thing smelled of a cover-up.

Toland refined the conspiracy theory. Having egged the Japanese into attacking the United States, Roosevelt kept the information about the approaching attack force to himself. Reveal it to Kimmel and Kimmel would launch aerial patrols. The Japanese, having been discovered, would have turned back, and Roosevelt would get no war. A small group of advisers, including Stimson, Knox, and Marshall, were aware of this but were sworn to secrecy. So the theory went.

In 1985 Admiral Edwin Layton, who had been Kimmel's intelligence chief in 1941, finally published his memoirs (*And I Was There*). Layton fell somewhere between the revisionist and establishment interpretations. There was no conspiracy, just incompetence, and most of that in Washington. To Layton the key to understanding Japanese intentions was in JN-25. After having initially been given the task of breaking the new code in 1939, the cryptologic unit on Pearl Harbor, reputedly the best in OP-20-G, was diverted onto the task of breaking the new Flag Officers' Code, which was never productive. In consequence, JN-25 was not broken until February of 1942. As NSA's Fred Parker has shown in his recent article in *Cryptologic Quarterly* (Fall 1986), the solution to the naval problem (where were the carriers?) was contained in that code. Had Safford stuck to his original work allocation, the cryptanalysts on Pearl Harbor might have broken JN-25 in time to avert the attack.

Lacking readable operational messages, Layton and his cryptologists were left to struggle with the externals. But the wily Japanese changed their callsigns twice, on 1 November and again on 1 December. By losing callsign continuity, the Pearl Harbor cryptologic team simply lost track of the carriers. Other traffic analytic indicators and straight-up logic convinced Layton and Kimmel that the fleet was moving south with some of the carriers, while the rest must be safely home in the Inland Sea awaiting "southern operations." That would mean the Philippines and Southeast Asia, not Hawaii.

The darkness in which Layton fumbled could have been illuminated by the consular messages in JN-19. They were readable and were being read – in Washington. But the decrypts did not, by and large, make the journey to Hawaii. Most famous of these was the

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"bomb plot" message. It was originally intercepted in September but was not decrypted until October because of a heavy workload and low priority of JN-19. The message revealed an unusual Japanese preoccupation with the precise positioning of the ships in Pearl Harbor, which had been presumed to relate to some sort of sabotage operation – hence the name "bomb plot." Back in Washington a bitter dispute erupted over whether or not to send the text of the message to Kimmel. The principal villain in the drama was Admiral Richmond Kelly Turner, brilliant but flawed chief of naval war plans (and later hero of naval amphibious operations in the Pacific). Turner had arrogated to himself the authority over the release of intelligence information, and in this case prevailed over the head of Naval intelligence to suppress the information. This was just the latest in an acrimonious dispute among Turner, the chief of naval intelligence, and the chief of naval communications over prerogatives. Layton called it the "feud on the quarter deck," and believed that it was largely responsible for vital intelligence not getting to field commanders in 1941. (Toland, too, made this point.)

To Layton, the Navy could not survive the fierce personal rivalries in Washington. But it went further than that. The system itself was fatally flawed. Intelligence analysis was slipshod. Washington authorities drew all the wrong conclusions. They pointed toward Europe and Southeast Asia, not Hawaii, as the likely areas of concern. They gambled on Magic providing enough information, and in so doing ignored the critical lack of naval operational information. Believing security to have been compromised when the Japanese found out about the security problem with the Purple machine, they held too much to themselves. There was no conspiracy – only misjudgment, bickering, and incompetence.

While the controversies raged, a quiet professor toiled in the history department of the University of Maryland. Gordon Prange had served as an Army historian on the staff of Douglas MacArthur in Japan and had developed a passion for the Pearl Harbor controversy. But Prange never could get around to publishing his views, and he died in 1980 with a pile of manuscripts but no published books. After his death two of his former students sorted through the collection and published *At Dawn We Slept* in 1981 and *Pearl Harbor: The Verdict of History* in 1985. Prange had done his research before NSA released its World War II archives and his coauthors decided not to do further research.

The best of the two is the latter. In detailed and often brilliant analysis, Prange showed that the burden of blame rested in Hawaii, not Washington. Mistakes were made in both locations, but the War and Navy Departments had placed the primary responsibility on the shoulders of the theater commanders. Those in Hawaii had failed. Though they did not have all the relevant diplomatic intercepts, they should not have needed them. Purple and JN-19 did not contain direct military information. Only JN-25 did, and it was unsolved. Enough had been passed to Honolulu to have made even the most taciturn commander edgy. Kimmel and Short were not on the alert. They should have been.

Prange also ruminated over the art of intelligence analysis as it was practiced in 1941. The failure of intelligence was not one of collection. There was plenty of collection. The failure was one of interpretation. No matter how detailed the information available, "there is no substitute for imagination and resourcefulness. . . ." (p. 556). It was not the technicians of the Army's Signal Intelligence Service and the Navy's OP-20-G who were to blame. It was the American approach to intelligence.

Prange suggested that this attitude was part of the American *Zeitgeist*. Science was king, and his subjects were suspicious of anything that could not be observed under a microscope or demonstrated in repeated laboratory tests. The imaginative interpretation of intelligence is much more an art than a science. So the American intelligence

community as scientists triumphed in technology and cold logic – Magic and cryptanalysis – but as artists failed in interpretation of the facts thus gathered.

Pearl Harbor still has a poignant relevance today to us as cryptologists, as well as to us as Americans. The conclusions are as timeless as the problem we confronted.

First, interservice and intraservice rivalry always loses. If the coordination between Army and Navy was bad in Washington and in Hawaii, it was even worse within the Navy itself. Admiral Turner unquestionably harmed the defense effort through overzealous aggrandisement and turf quarrels. It was inexcusable then – it is inexcusable today. And it can be seen everywhere one goes in the Federal Government.

There is a delicate balance between the requirements of secrecy and the needs of the customer. At Pearl Harbor this balance was not properly struck. Information was kept from field commanders on whose shoulders the administration had placed a great deal of responsibility. Information did not flow because we feared losing the source. It remained bottled up in Washington, serving as small talk for intelligence professionals, State Department officials, and a limited number of operational staff planners. It is not easy to achieve a balance, but it must be done, constantly, in thousands of daily decisions over disclosure and dissemination. We face the same decisions today, in far greater quantity, though with no greater consequence. We weren't smart about it then. Are we now?

Speaking of customers, we weren't even sure who our customers were in 1941. There was confusion over what was military, what was diplomatic, what would have import to a commander, and what must be decided by politicians. Information was carried about Washington in mysterious satchels, amorphous collections of high-level diplomatic decrypts, consular code information, and low-level military data. There was no system for keeping things separate, for making intelligent decisions over who needed to see what, and when they saw it, what they were to make of it. It was all "burn before reading" stuff and was promptly destroyed after a quick glance. (There was one famous incident in which a Magic decrypt was found in a wastebasket in the Oval Office, and the Army stopped sending verbatim transcripts to Roosevelt for several months.)

Incredibly, the bonanza of readable Japanese messages had not brought with it a rational processing and analytic system. Our processing system was not much more sophisticated than Decrypt, Translate, and Forward. The cryptologic elements – OP-20-G and Signal Intelligence Service – did no recognizable analysis, confining themselves to the technical side of the business. There was no concept of product reporting, carrying with it an implication of some higher-level metaphysical process and system of correlation of information. Nor was there much of a system within the War and Navy Departments. The G2 organizations in the respective Services were primitive beyond belief. Only one person in the Army G2, Colonel Rufus Bratton, was apparently trying to correlate various sources of intelligence on the Far East and draw analytical conclusions from them. He sometimes wrote short notes containing conclusions which were passed on to the readers. Only the direct customers saw these – Roosevelt, Stimson, Knox, General Sherman Miles (G2 of the Army), and a handful of others. The list of Magic customers was so short that delivery of the famous 14-part message was taken care of by a single person, Alwin Kramer, motoring about Washington late at night in a car driven by his wife. These high-level readers would have only a few minutes to digest the contents of the latest intercept. They would be expected, from rote memory, to recall the precise contents of the decrypt, perform instant analysis without reference to files, statistics or, historical data, and to render momentous political and military judgments more or less instantly based on this information.

We Americans lived in a very simple world in 1941. The British, having confronted the menace of fascism since the late 1920s, were far ahead of us in intelligence analysis.

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At Bletchley Park they had already developed a complex system for processing, analyzing, correlating, and reporting Sigint information. They had a historical data base on 5 x 8 cards (shades of NSA's early years) and had special units in the field to interpret Sigint reports emanating from Bletchley, so that military commanders would not be thrown to their own relatively limited resources to make it meaningful. We later adopted their system and still use much of it. In 1941 we had none of it and were "caught with our pants down."

With rigorous analysis of all sources it is hard to see how we could have missed the signs. There were too many of them to miss. Sigint and Humint (there was no Photint) provided enough information to alert even the most complacent. But they were not being integrated and reported in thoughtful, prescient reports. They were being shuttled about Washington in black bags, fragmented and uncorrelated. Wohlstetter's "noise" thesis applies to the situation as it existed in 1941. It was a situation made to order for surprise.

Should the cryptologic community have been more active in analysis and interpretation? Should we report conclusions? When Safford read the bomb plot message, he wrote a report for Kimmel containing analytical conclusions and a blunt warning about possible attack. In an epic battle among Turner, the intelligence professionals, and Naval communicators, the effort was squashed, and the message was never sent. The issue haunts us today as it did then and has never been completely resolved. We have gone halfway. We still do not have the mission of producing finished intelligence, but we do analyze, interpret, and report our findings. We have long since dispatched interpreters, in very British fashion, in the form of NCRs and CSGs. In the main, though, we stick pretty close to our technical charter. The world of analysis and interpretation is very sticky, and we would oft prefer that others fail than ourselves. We like clean, hard scientific verification, rather than messy hypotheses and metaphysical ruminations. In some cases we fail to put ourselves on the limb of judgment for fear of being cut off.

To achieve the right exposure of cryptologic information we must be in the proper place in the bureaucracy. But where is that place? In 1941 it was clearly too low. The ranking cryptologist in the Navy in 1941 was Laurance Safford, a captain (O-6). He was part of Navy communications, and his judgments were subordinated to officers who worried more about long-haul HF circuits. In the Army, Signal Intelligence Service was part of Army communications, and like the Navy, its relationship to the intelligence function was problematical. Such a structure placed a premium on the technical side of the business – on collection, communications, and cryptanalysis. There was no marriage with the function of intelligence analysis. Just as important, there was only the most tenuous association between Army and Navy cryptologists, and World War II cryptology was riven by factionalism, rivalry, and overlap. State and FBI were also customers but took a decided backseat to the Services, who owned all the resources. This thicket of bureaucracy was sorted out and corrected to some degree by the creation of NSA in 1952.

These are a few of the ponderables about Pearl Harbor. They are not immutable lessons. Facts rarely change, but our interpretation of them changes dramatically over time, and every generation has reopened the dispute over Pearl Harbor. How one sees the failure is rooted partly in one's generation, partly in one's politics. But we must continue to return to the controversy. In the words of Gordon Prange,

> Humanity cannot afford to forget .... The world is much too small; the risk is much too great; the time is much too late.

Amen.

~~(FOUO)~~ **Mr. Johnson has headed the Division of History and Publications (T542) since August 1985, when he originally joined NSA as a civilian. Prior to that he was a career Air Force officer with a specialization in cryptology. He served in a wide variety of posts at NSA and in the field**

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His academic specialty was in American history, and he earned a PhD from University of Maryland in 1975 in that field. He has taught history at Pennsylvania State University, University of Maryland, and the U.S. Air Force Academy. Mr. Johnson is a prior contributor to the *Cryptologic Quarterly* and has also published historical articles in academic journals. He is a certified Collection Officer.

Do You Really Truly Want to Know Everything There is to Know about Pearl Harbor?

Here is a sampler of some of the important works on the subject, most (but not all) taken from the text of this article. For the demonstrably insane there are extensive bibliographies in the backs of any of the more recent books on the subject: Toland, Layton, and Prange come to mind.

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Toland, John. *Infamy: Pearl Harbor and Its Aftermath*. Garden City, New York: Doubleday, 1982.

Tolley, Kemp. *Cruise of the Lanikai: Incitement to War*. Annapolis: Naval Institute Press, 1973. [Tolley supports the theory that two small gunboats were sent by Roosevelt into Far Eastern waters to egg the Japanese into an attack.]

Trefousse, Hans Louis. *Pearl Harbor: The Continuing Controversy*. Melbourne, Florida: Krieger Publishing Company, 1982.

Waller, G. M., ed. *Pearl Harbor: Roosevelt and the Coming of the War*. Lexington, Massachusetts: D. C. Heath and Company, 1965. [This is an excellent anthology of writings on the subject of Pearl Harbor.]

Wohlstetter, Roberta. *Pearl Harbor: Warning and Decision*. Stanford, California: Stanford University Press, 1982.